THE CLAIMS

The status of all claims is given below.

1-52 (Cancelled)

53. (Currently amended) An array of eukaryotic cells engineered to express a library of C_HBP ~~An C_HBP array in eukaryotic cells~~, comprising at least two eukaryotic cells that result from transfecting a population of eukaryotic cells with a library of at least two different C_HBP polynucleotides wherein said eukaryotic cells are each transformed with a different polynucleotide of said library of at least two different C_HBP polynucleotides wherein each C_HBP polynucleotide encodes at least one C_HBP polypeptide that:

(a) comprises an amino acid sequence that is at least 75% identical to a constant region tailpiece of a mu or alpha chain of a native immunoglobulin heavy chain;

(b) comprises multiple ~~combining~~ antigen binding sites, wherein all of the combining sites satisfy the same one of the following requirements:

(i) at least 75% identity to a 25 consecutive amino acid portion of an immunoglobulin light chain variable region; or

(ii) at least 75% identity to a 25 consecutive amino acid portion of an immunoglobulin heavy chain variable region; and

(c) either (i) specifically binds to a ligand with a $K_D<10^{-6}$ moles/liter; or (ii) forms one or more covalent bonds with one or more polypeptides in the transfected cell, to generate a C_HBP that specifically binds to a ligand with a $K_D<10^{-6}$ moles/liter; and

(d) differs in amino acid sequence from other C_HBPs in the array;

wherein the cells assemble C_HBPs comprising at least four ~~combining~~ antigen binding sites.

54. (Currently amended) An array of eukaryotic cells ~~A binding protein array~~ according to claim 53, wherein the polynucleotides encode polypeptide components of immunoglobulin molecules independently selected from the group consisting of heavy chains and fragments thereof, light chains and fragments thereof, J chains and secretory components.

55. (Currently amended) An array of eukaryotic cells ~~A binding protein array~~ according to claim 53, wherein the cells are plant cells.

56. (Currently amended and withdrawn) An array of eukaryotic cells ~~A binding protein array~~ according to claim 53, wherein the cells are insect cells.

57. (Currently amended and withdrawn) An array of eukaryotic cells ~~A binding protein array~~ according to claim 53, wherein the cells are mammalian cells.

58. (Currently amended) An array of eukaryotic cells ~~A binding protein array~~ according to claim 55, wherein the plant cells are selected from the group consisting of corn, rice, Lemna, tobacco and *Chlamyodomonas*.

59. (Currently amended) An array of eukaryotic cells ~~A binding protein array~~ according to claim 53, wherein at least 10 different binding proteins are assembled by the cells in the array.

60. (Currently amended) An array of eukaryotic cells ~~A binding protein array~~ according to claim 53, wherein at least 100 different binding proteins are assembled by the cells in the array.

61. (Currently amended) An array of eukaryotic cells ~~A binding protein array~~ according to claim 53, wherein at least 1,000 different binding proteins are assembled by the cells in the array.

62. (Currently amended) An array of eukaryotic cells ~~A binding protein array~~ according to claim 53, wherein at least 10,000 different binding proteins are assembled by the cells in the array.

63. (Currently amended) An array of eukaryotic cells ~~A binding protein array~~ according to claim 53, wherein each cell within the array is transfected with at least two different

polynucleotides, each encoding a different C_HBP component, such that each cell assembles a functional C_HBP comprising the C_HBP components.

Claims 64-66 (Cancelled)

67. (Currently amended) An array of eukaryotic cells ~~A binding protein array~~ according to claim 55, wherein the plant cells are dicotyledonous plant cells.

68. (Currently amended) An array of eukaryotic cells ~~A binding protein array~~ according to claim 55, wherein the plant cells are monocotyledonous plant cells.

69. (Currently amended) An array of eukaryotic cells ~~A binding protein array~~ according to claim 53 wherein each C_HBP component comprises a variable region from a light chain.

70. (Currently amended) An array of eukaryotic cells ~~A binding protein array~~ according to claim 53 wherein each C_HBP component comprises a variable region from a heavy chain.

71. (Cancelled)

72. (New) A library of eukaryotic cells, comprising at least two eukaryotic cells, said cells engineered to express foreign genes a different C_HBP comprising at least two C_HBP polypeptides, wherein each C_HBP polypeptide:

(a) comprises an amino acid sequence that is at least 75% identical to a constant region tailpiece of a mu or alpha chain of a native immunoglobulin heavy chain;

(b) comprises multiple antigen binding sites, wherein all of the combining sites satisfy the same one of the following requirements:

(i) at least 75% identity to a 25 consecutive amino acid portion of an immunoglobulin light chain variable region; or

(ii) at least 75% identity to a 25 consecutive amino acid portion of an immunoglobulin heavy chain variable region; and

(c) either (i) specifically binds to a ligand with a $K_D<10^{-6}$ moles/liter; or (ii) forms one or more covalent bonds with one or more polypeptides in the transfected cell, to generate a C_HBP that specifically binds to a ligand with a $K_D<10^{-6}$ moles/liter; and

(d) differs in amino acid sequence from other C_HBPs in the array;

wherein the cells assemble C_HBPs comprising at least four antigen binding sites.

73. (New) An array of eukaryotic cells according to claim 72, wherein the polynucleotides encode polypeptide components of immunoglobulin molecules independently selected from the group consisting of heavy chains and fragments thereof, light chains and fragments thereof, J chains and secretory components.

74. (New) An array of eukaryotic cells according to claim 72, wherein the cells are plant cells.

75. (New) An array of eukaryotic cells according to claim 72, wherein the cells are insect cells.

76. (New) An array of eukaryotic cells according to claim 72, wherein the cells are mammalian cells.

77. (New) An array of eukaryotic cells according to claim 76, wherein the plant cells are selected from the group consisting of corn, rice, Lemna, tobacco and *Chlamyodomonas*.

78. (New) An array of eukaryotic cells according to claim 72, wherein at least 10 different binding proteins are assembled by the cells in the array.

79. (New) An array of eukaryotic cells according to claim 72, wherein at least 100 different binding proteins are assembled by the cells in the array.

80. (New) An array of eukaryotic cells according to claim 72, wherein at least 1,000 different binding proteins are assembled by the cells in the array.

81. (New) An array of eukaryotic cells according to claim 72, wherein at least 10,000 different binding proteins are assembled by the cells in the array.

82. (New) An array of eukaryotic cells according to claim 72, wherein each cell within the array is transfected with at least two different polynucleotides, each encoding a different C_HBP component, such that each cell assembles a functional C_HBP comprising the C_HBP components.

83. (New) An array of eukaryotic cells according to claim 74, wherein the plant cells are dicotyledonous plant cells.

84. (New) An array of eukaryotic cells according to claim 74, wherein the plant cells are monocotyledonous plant cells.

85. (New) An array of eukaryotic cells according to claim 72, wherein each C_HBP component comprises a variable region from a light chain.

86. (New) An array of eukaryotic cells according to claim 72, wherein each C_HBP component comprises a variable region from a heavy chain.